

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 02/00518

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N5/08 A61K35/12 A61K48/00 G01N33/50

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N A61K G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, MEDLINE, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PECHOUX CHRISTINE ET AL: "Human mammary luminal epithelial cells contain progenitors to myoepithelial cells." DEVELOPMENTAL BIOLOGY, vol. 206, no. 1, 1 February 1999 (1999-02-01), pages 88-99, XP002216780 ISSN: 0012-1606 cited in the application the whole document</p> <p>---</p> <p>-/-</p>	1-32

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

19 May 2003

Date of mailing of the International search report

27/05/2003

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>DATABASE MEDLINE 'Online! 15 January 2001 (2001-01-15) SMITH G H ET AL: "Mammary epithelial stem cells." Database accession no. NLM11169867 XP002216783 abstract & MICROSCOPY RESEARCH AND TECHNIQUE. UNITED STATES 15 JAN 2001, vol. 52, no. 2, 15 January 2001 (2001-01-15), pages 190-203, ISSN: 1059-910X</p> <p>---</p>	1-32
A	<p>MICHEL MARTINE ET AL: "Keratin 19 as a biochemical marker of skin stem cells in vivo and in vitro: Keratin 19 expressing cells are differentially localized in function of anatomic sites, and their number varies with donor age and culture stage." JOURNAL OF CELL SCIENCE, vol. 109, no. 5, 1996, pages 1017-1028, XP002216781 ISSN: 0021-9533 cited in the application the whole document</p> <p>---</p>	1-32
A	<p>BARTEK J ET AL: "EFFICIENT IMMORTALIZATION OF LUMINAL EPITHELIAL CELLS FROM HUMAN MAMMARY GLAND BY INTRODUCTION OF SIMIAN VIRUS 40 LARGE TUMOR ANTIGEN WITH A RECOMBINANT RETROVIRUS" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 88, 1 May 1991 (1991-05-01), pages 3520-3524, XP002020221 ISSN: 0027-8424 cited in the application the whole document</p> <p>---</p> <p style="text-align: center;">-/--</p>	7-17

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SMALLEY MATTHEW J ET AL: "Differentiation of separated mouse mammary luminal epithelial and myoepithelial cells cultured on EHS matrix analyzed by indirect immunofluorescence of cytoskeletal antigens." JOURNAL OF HISTOCHEMISTRY AND CYTOCHEMISTRY, vol. 47, no. 12, December 1999 (1999-12), pages 1513-1524, XP002216788 ISSN: 0022-1554 cited in the application the whole document ---	1-32
A	SLADE MARTIN J ET AL: "The human mammary gland basement membrane is integral to the polarity of luminal epithelial cells." EXPERIMENTAL CELL RESEARCH, vol. 247, no. 1, 25 February 1999 (1999-02-25), pages 267-278, XP002216782 ISSN: 0014-4827 cited in the application the whole document ---	1-32
A	US 5 650 317 A (CHANG C. ET AL.) 22 July 1997 (1997-07-22) the whole document ---	1-32
A	DATABASE BIOSIS 'Online!' BIOSCIENCES INFORMATION SERVICE, PHILADELPHIA, PA, US; March 2000 (2000-03) NAYAK SHANKAR K ET AL: "Characterization of cancer cell lines established from two human metastatic breast cancers." Database accession no. PREV200000246693 XP002216785 abstract & IN VITRO CELLULAR & DEVELOPMENTAL BIOLOGY ANIMAL, vol. 36, no. 3, March 2000 (2000-03), pages 188-193, ISSN: 1071-2690 --- -/-	1-32

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>GUDJONSSON THORARINN ET AL: "Normal and tumor-derived myoepithelial cells differ in their ability to interact with luminal breast epithelial cells for polarity and basement membrane deposition."</p> <p>JOURNAL OF CELL SCIENCE, vol. 115, no. 1, 1 January 2002 (2002-01-01), pages 39-50, XP002241565 January 1, 2002 ISSN: 0021-9533 cited in the application the whole document</p> <p>---</p>	1-32
P,X	<p>GUDJONSSON THORARINN ET AL: "Isolation, immortalization, and characterization of a human breast epithelial cell line with stem cell properties."</p> <p>GENES & DEVELOPMENT, vol. 16, no. 6, 15 March 2002 (2002-03-15), pages 693-706, XP002241566 March 15, 2002 ISSN: 0890-9369 the whole document</p> <p>-----</p>	1-32

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

Although claims 26–27 and 29 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/00518

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5650317	A 22-07-1997 US	5814511 A 6140119 A	29-09-1998 31-10-2000